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ABSTRACT

Changes to the Scholastic Aptitude Test (SAT) that will be introduced in the 1993-94 academic year are reviewed, with attention to edumetric factors such as relationship of curriculum and instructional practice to test design and the impact of the changes. The new SAT will put increased emphasis on critical reading skills to reflect developments in research and instruction. Vocabulary knowledge will be measured in context. Changes in the verbal test are responsive to widespread interest in considering the consequences for educational practice of what is included in important tests. In the mathematics section, new questions will require students to arrive at an answer instead of choosing one, and calculator use will be allowed. Current achievement tests will be expanded and enhanced by: (1) writing tests as part of the subject tests; (2) listening comprehension for language tests; (3) expansion of the subject tests to include Asian languages and English as a Second Language; and (4) modification of tests in mathematics and science to allow calculator use. A new writing test will replace the existing assessments. General recommendations for educational assessment and performance assessment are presented. There are three references. An appendix contains sample questions from the new test forms. (SLD)

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EDUMETRIC CONSIDERATIONS IN THE DESIGN OF THE NEW SAT[1]

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Educational Testing Service

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INTRODUCTION

In this paper I review changes that will be introduced into the SAT in the 1993-94 academic year with particular attention to "edumetric" factors such as the relationship of curriculum and instructional practices to the test design and the anticipated impact of the changes. This discussion focuses on the following components of the New SAT:

- SAT-I: Verbal
- SAT-I: Mathematical
- SAT-II: Subject Tests
- SAT-II: Writing

Following the discussion of the SAT changes I make some general recommendations regarding the use of constructed response or performance assessment approaches in large scale assessments. Finally, I compare the flavor of current discussions of alternatives to standardized tests with the tone used by early advocates of standardized tests.

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SAT-I: REASONING TESTS
VERBAL

Inclusion of critical reading passages and questions will bring the test into closer alignment with current professional thinking about how reading ability develops and how it is best assessed. The new critical reading passages will be longer than the reading passages in the current SAT and will better allow assessment of the ability of students to evaluate and make judgments about points of view expressed in written passages, an important skill required in much college reading. Two basic and well-established measures of verbal reasoning will be continued in the new verbal test: analogies and sentence-based questions. A third verbal question type in the current test—antonyms—will be discontinued. Vocabulary knowledge will continue to be tested through the use of vocabulary-in-context questions, based either on critical reading passages or on independent sentences.

KEY FEATURES OF SAT-I: VERBAL

- Emphasis on critical reading and reasoning
- Longer reading passages
- More accessible and engaging reading material
- A double passage with two points of view on the same subject
- Introductory and contextual information for the reading passages
- Reading questions that measure higher-order analytical and evaluative skills
- Passage-based questions testing vocabulary in context
- Discrete questions measuring verbal reasoning and vocabulary in context

The verbal component of SAT-I will focus even more than the current test on the ability to read critically, an undisputed instructional goal of both secondary and college education. It will also be designed to reflect current research in reading and cognitive science. The critical reading passages will be lengthy but accessible—that is, well-written and readable, engaging, not overly dense or technical, and with contextual information provided as appropriate.

Critical reading questions will reflect the process that a reader goes through while deriving meaning from the text; items will assess the test-taker's ability to interpret, synthesize, analyze, and evaluate the reading material. Students will also be asked vocabulary questions on words in the passages. At least half of the new verbal component of SAT-I will be critical reading questions, and more than three-fourths of the verbal testing time will be spent on the reading passages and questions. A sample critical reading passage is provided in the Appendix.

Edumetric Issues -- SAT-I: Verbal

The increased emphasis on reading in the New SAT-I: Verbal Section and the nature of the passages and questions clearly reflect developments in research and instruction. In addition, the decision to measure vocabulary knowledge in context represents an effort to discourage drill and practice on SAT word lists, a singularly fruitless activity.

Although the changes in the Verbal Test do not include the addition of performance assessment components, they are responsive to the widespread interest in considering the consequences for educational practice of what is included or not included in important tests. To the extent that the SAT-I: Verbal is used as an instructional target, development of critical reading skills should be recognized as the activity to engage in to improve student performance.

SAT-I: REASONING TESTS
MATHEMATICAL

The mathematical component of SAT-I will include questions that require students to produce a response—not just to select a response from a set of multiple-choice alternatives. This new format (sometimes informally referred to as "grid-in" questions) will make up about 20 percent of the proposed new mathematical test. The rest of the test will consist of established problem- solving questions in five-choice and quantitative-comparison formats. The new test will emphasize the application of mathematical concepts and the interpretation of data. Another significant change is that calculators will be permitted for use in the math section of SAT-I.

KEY FEATURES OF THE NEW SAT-I: MATHEMATICAL

- Use of non-multiple-choice questions requiring students to produce and grid in their own answers to some questions
- Calculator use permitted (but not required)
- Continued emphasis on problem solving in the domains of arithmetic, algebra, and geometry
- Increased emphasis on data interpretation and applied mathematics questions

The new SAT-I math section will include proportionally more data interpretation and applied mathematics questions, oriented to problem solving in practical, real-life situations. The primary enhancement in the new mathematical measure will be the inclusion in each SAT form of 10-15 questions for which students will have to produce their own responses rather than select an answer from among several choices. Test-takers then will write and "grid in" their answers to these questions on an answer sheet specially designed for this purpose. Sample mathematical questions requiring student-produced responses are provided in the Appendix; some of the questions have more than one possible correct answer.

Another significant change will permit test-takers to use a calculator. This change will parallel the changes occurring nationally in the use of calculators in mathematics instruction and is consistent with the basic principle that "appropriate calculators should be available to all students at all times,"* put forth in the most influential curriculum document of the decade. Mathematics educators serving on various committees and councils of the College Board have strongly supported this enhancement. Students participating in field trials during the developmental period have indicated their preference for being permitted to use a calculator in the testing situation. As has always been the case, however, it will not be necessary to use a calculator for any problem on the math section of SAT-I to arrive at a solution. The test will continue to emphasize mathematical understanding and problem solving rather than computation.

*Curriculum and Evaluation Standards for School Mathematics, Reston, Va.: National Council of Teachers of Mathematics, 1989, p. 8.

Edumetric Issues -- SAT-I: Mathematical

The incorporation of student-produced responses and opening up the SAT-I: Mathematical component to calculator use in the spring of 1994 are two changes that are closely linked to edumetric considerations. By requiring a student to arrive at an answer instead of choosing one we eliminate "backing into the answer" response strategies. We also take a step toward the time when computer delivery of the test will offer substantial flexibility with response formats.

The introduction of calculator use is an even more straightforward example of testing being influenced by curriculum and instructional practice and, in turn, exerting an influence on those practices. Mathematics educators strongly urged the College Board and ETS to permit calculator use so that the SAT-I: Mathematical component would be consistent with the NCTM Curriculum and Evaluation Standards. Now that schools are aware that the SAT will permit calculators, a potential barrier to incorporating calculator use into coursework is changed into an encouragement to follow the guidelines of the NCTM.

SAT-II: SUBJECT TESTS

The current Achievement Tests will be expanded and enhanced as they become part of SAT-II: Subjects. One major change—administration of a writing test with an essay as part of the subject tests—is described on page . Tests in foreign-language subjects will be enhanced by the addition of listening components, and tests in math and science subjects will be modified, as necessary, to incorporate the use of calculators.

The subject tests will also be expanded to include Asian language tests— initially Japanese and Chinese—a test of proficiency in English as a second language, and tests useful for entry-level course placement in basic English and mathematics. There will be an exploration of how more student-produced responses could be integrated into the SAT-II tests.

The SAT-II subject tests, with their focus on subject-matter testing, will measure a wide variety of skills and areas of knowledge essential to solid academic work in college. Assessment within these domains will help students identify, and encourage them to develop, the important academic skills that should be mastered in secondary school. Students will also be better able to judge and compare their levels of competence in these areas with the competence levels of other college-bound students. The SAT-II tests will provide important information to colleges and students that can be used for planning course work and for course placement in the freshman year.

The SAT-II tests, with their emphasis on academic subject-matter proficiency, will be useful to schools because they will provide group profile information with clearer instructional implications relevant to the schools' educational goals. In addition, the focus on subject tests will encourage schools interested in helping students prepare for tests to emphasize the content of particular courses, and to examine and evaluate their curriculums.

Although implementation of SAT-II will not take place until Spring 1994, a phasing in of some elements has already begun. One change that will be implemented in June 1991 is the introduction of a version of the Mathematics Level II Achievement Test that requires the use of a calculator. In addition, a listening component for certain foreign language tests, using authentic stimulus materials from a variety of sources, will be introduced during 1992-93.

The addition of Asian language tests is of particular importance given the greater emphasis now being given to the study of these languages at the secondary school and college levels, and the increasing numbers of recent immigrants from Pacific Rim countries enrolled in the U.S. educational system. Another area of potential expansion involves the development of measures of English language proficiency, which should help non-native English speakers judge their preparedness to undertake postsecondary courses conducted in English. Such measures should also help institutions to identify the areas of English usage in which students need continued assistance. Another proposed addition is the inclusion of tests that would help evaluate mastery of basic skills and placement of students into appropriate developmental programs in English and mathematics. The College Board's current Descriptive Tests of Language Skills (DTLS) and Descriptive Tests of Mathematics Skills (DTMS) are examples of measures that could be revised for inclusion in SAT-II, for use in English and mathematics placement.

Edumetric Issues -- SAT-II: Subject Tests

As has been noted, among the changes for the SAT-II: Subject Tests has been the introduction in June 1991 of required calculator use for a special version of the Mathematics Level II Test. Requiring calculators on this subject test further reinforces the importance of building calculator competence at the high school level. The planned addition of listening components to foreign language tests is another change which is very consistent with the advice of language educators who welcome breadth of assessment of their students' skills. In each case the changes broaden the tests, leaving still untested in the formal examination setting, however, other aspects of student competence.

SAT-II: WRITING TEST

The Writing test in SAT-II will consist of a combination of multiple- choice questions and a direct writing sample at each of five administrations per year. The new SAT Writing test will replace the all-multiple-choice Test of Standard Written English (TSWE), which currently accompanies every SAT, and the English Composition Test (ECT), which currently is offered with a direct writing sample only once a year. The Writing test will be offered each time the SAT-II series is administered. It will be designed to be useful in both admissions and placement, and in that regard will combine into a single test the functions of the current ECT and TSWE.

KEY FEATURES OF SAT-II: WRITING

- An essay provides a direct measure of writing ability, reflecting the increasing importance placed on this area by schools and colleges.
- Essay topics will not assume any specific subject- matter knowledge, but will assess a student's general abilities in written expression.
- Revision-in-context passages present a context larger than a discrete sentence and therefore permit questions on logic, coherence, and organization.
- Revision-in-context tasks are similar to common in-class exercises in which students revise their own essays.
- The Usage and Sentence Correction types of questions require recognition of errors and of ways in which to present the most appropriately written sentences.

The new Writing test is designed to assess various aspects of students' writing skills. These skills will be assessed in 40 minutes of multiple-choice items that require recognition of the conventions of standard written English, appropriate diction, and effective and logical expression. In addition, students will be asked to demonstrate their writing skills directly by drafting a 20-minute composition in response to an assigned topic.

The essay portion of the Writing test will give students an opportunity to present a sample of their writing. This sample, an impromptu essay generated under timed conditions on an assigned topic, will be scored by high school and college teachers who, by virtue of their expe-

rience, have appropriate expectations of the quality of writing done by students in transition from high school to college. The topic will not require specialized knowledge of any particular academic discipline but will give students opportunities to use a broad range of knowledge and experiences in support of their discussion.

The multiple-choice component of the Writing test will consist of two types of questions currently used in the TSWE and the ECT, and a third that will be new. The Usage and Sentence Correction types of questions have been used successfully to measure a student's command of sentence-level aspects of writing. The Revision-in-Context format is a multiple-choice type of question designed in response to the request of English teachers that students encounter writing problems in a context larger than a discrete sentence, since secondary school and college students usually work with pieces of writing that are larger than sentences. The broader context enables the use of multiple-choice questions about organization, logical development, and audience, as well as about grammar, sentence structure, and diction. Further, the nature of the presentation—attention to the revision of a draft essay—is a moderately close approximation of current classroom efforts required by many composition teachers. Examples of essay topics and of a Revision-in-Context question set are provided in the appendix.

The design of the Writing test will provide for a mix of writing tasks recognized as relevant and appropriate by writing educators. The mix of types of questions will represent a continuum of required skills from Usage (finding the error in a sentence), to Sentence Correction (choosing the best and most effective form of a sentence), to Revision-in-Context (working beyond the sentence level to revise or provide logical links), to the Essay (producing an actual piece of writing).

Edumetric Issues -- SAT-II: Writing

The inclusion of an SAT-II: Writing Test, incorporating a student essay, at every administration of the Subject Tests represents a substantial expansion of direct measurement of student writing. Using the overall name "SAT" to encompass the Subject Tests helps communicate the importance of these tests in presenting a more complete portrayal of student skills.

Even with the critical ingredient of an essay, it is recognized that a full scale assessment of students' writing skills requires considerably more. The role of planning and rewriting, for example, and the need to adjust one's approach depending on the purpose for writing would also need to be evaluated.

RECOMMENDATIONS

I would like now to present a set of general recommendations.

1. Consider Impact on Practice - When you choose test content and item types, consider the likely impact of your selections on how teachers and students will prepare for the test.
2. Realistic Beginnings - Look for ways to add performance assessment components to existing programs but within the confines of attainable budgets.
3. Writing - If you do not have direct measurement of writing, this is a good place to start. Do not assume, however, that it will be easy or inexpensive to do well. Also use a combination of different types of measurement approaches:

Multiple-Choice Assessments	Direct Writing
• editing	• ability to communicate
• word choice	• ability to organize ideas
• recognizing organization	
• correctness	

4. Target your use of methods - Use performance assessment components where they are most needed to measure what is valued. Performance assessment is needed less for reading and some aspects of social studies than for writing and some aspects of sciences. It is also needed less for mathematics concepts than for mathematics applications.
5. Consider Sampling Use - If you have the option of using performance assessment on a sampling basis, perhaps as a supplement to your every-pupil program, pursue this possibility. You can get many of the benefits of acceptance without all the attendant costs. For some purposes you may be

able to test all students and score all responses locally and only some centrally.

6. Use as Supplement - Do not consider performance assessment as the basic method for a high stakes and large scale assessment program but as a supplement to standardized measures.
7. Learn from Others - Very good materials exist on setting up a writing assessment program, for example. Experienced veterans are available who can help you deal with all aspects of design and implementation. A large supply of very good prompts has already been developed. Less is available in other domains but a number of thoughtful people are trying to provide guidance, e.g., Clare Burstall, Rick Stiggins, Grant Wiggins, staff from Connecticut Department of Education, and others.
8. Work with a Veteran - Try to plan and carry out your program in collaboration with someone who has practical experience in bringing to life an assessment program with significant performance components.
9. Extensive Pilots - Include in your program planning considerable opportunity to pilot materials and methods before you have to make your first operational reports.
10. Weigh Positives and Negatives - Don't be discouraged by the negative aspects of performance assessment but don't ignore them either. In each proposed application, evaluate the costs and gains and make a reasonable decision. This should virtually always be some combination of measurement methods.

CLOSING COMMENTS

- To me one of the most striking features of the current interest in performance assessment is intense enthusiasm of a number of its advocates. In my own professional experience, perhaps the closest prior example of such missionary spirit was the criterion-referenced testing movement. I have seen some of this same spirit in people working on computer-based testing.
- I thought it might be instructive to look at some of the relatively early books on standardized testing in the U.S. to try to pick up some of the flavor of the beginning of that movement. Here are a couple of examples.

> Without objective information of the kind which is obtainable only from standardized tests, the guidance of... a student can rest upon little more than guess work. One is tempted to put it more strongly and to say that "educational guidance without educational testing is professional quackery," as much so as in the case of the physician who refuses to employ the approved laboratory techniques in the diagnosis and treatment of diseases (Ruch & Stoddard, p.xviii).

> In other days there were ordeals by fire, by water, by battle, and by examinations in academic subjects. The tests by fire, water, and battle were subject to accidental conditions and even to manipulation, so that the will of heaven was not always accurately divined. To a higher degree the ends of justice and of education were furthered by examinations in academic subjects. But for students, too commonly, examinations remained ordeals. To take an examination was a highly chanceful proceeding. Success or failure might turn on the answer to a single question. There were freaks of memory; there was variability in the interpretation of questions and of answers. Much besides scholarship was incidentally tested. A good but nervous student might fail, while a more phlegmatic student of duller wit might pass. It is the purpose of new, carefully constructed, objective tests to do more than give marks that merely distinguish the elect. It is their purpose to reveal the instructional needs of the teacher as well as the educational needs of students; to lighten the burden of the teacher, and to give teacher and students assurance that a valid and just test and not an ordeal has been applied. How they do it is the message of this book (Orleans & Sealy, back of inside title page).

- The enthusiasm for standardized tests reflected in these statements was very widely shared and helped lead to the development of:
  - -- measurement profession
  - -- national testing programs
  - -- commercially available tests that are household words, e.g., Iowa's, Stanfords, CTBS, SAT, ACT, DAT
- Although there are critics who wish the situation were otherwise, it is hard to imagine our society without standardized tests.
- We now have very strong enthusiasm for a quite different orientation toward testing. Can the energy that the idea of performance assessment has generated be used to create positive and lasting change? That is our challenge. Can we do as much as those who laid the foundation for standardized testing in the 1920's and 1930's or will we be ground up by the challenges? Will we collaborate productively or merely spend our time pointing out the shortcomings in the "other sides" methods or products? I believe I know whose responsibility it is to help find the proper places for performance testing and standardized testing. I think you know also. Is there a mirror handy?

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Orleans, J.S. & Sealy, G.A. (1928). Objective Tests. Yonkers-on-Hudson, NY: World Book.

Ruch, G.M. & Stoddard, G.D. (1927). Tests and Measurements in High School Instruction. In Editor's Introduction, p.xviii by Lewis M. Terman (Ed.), Yonkers-on-Hudson, NY: World Book.

APPENDIX: SAMPLE QUESTIONS FOR SAT-I AND SAT-II

SAT-I: REASONING TESTS

Verbal Attached is a critical reading passage with accompanying questions. The passage is a "double" social science passage. The question assesses the ability to evaluate, interpret, and synthesize ideas and to define vocabulary in context.

Evaluation questions assess the ability to make judgments about the text rather than to interpret, analyze, or synthesize the information in the text. These questions test the ability to evaluate the assumptions on which the author bases an argument; to judge the adequacy of text with respect to internal consistency; to recognize techniques used by the author; to distinguish style, tone, and audience and to apply information from the text to information not presented in the text.

Interpretation questions assess the ability to make inferences from small pieces of text, including interpreting, resolving potential ambiguities, and inferring actions and motives that are not specifically stated in the text.

Synthesis (and analysis) questions assess the ability to relate various portions of the text to each other or to recognize how a particular part of the text relates to the overall organization of the passage. They test the ability to impose meaning on the text by integrating the various details presented, to make inferences across large portions of text, to see cause and effect, to follow the logic of an argument, and to understand the overall implications of what is stated in the passage.

Vocabulary in context questions assess the student's ability to infer the meaning of a word from its written context.

SAT-I: REASONING TESTS

Mathematical Six of the ten sample questions require students to produce their own responses and grid the response on the answer sheet; these questions illustrate decimal, integer, and fraction solutions, and three questions test skills in context, using practical, real-world examples. (Two questions in the latter category are also appropriate for the gridded response version of the math test in SAT-I.)

SAT-II: SUBJECT TEST

Writing Three sample essay topics and one revision-in-context passage and accompanying questions. These questions illustrate sentence structure, usage (diction), combination of sentences, and passage organization and development.

SOCIAL SCIENCE DOUBLE PASSAGE

Below are two excerpts from speeches that were made more than 2,000 years apart and yet have much in common: both speeches address the issue of democracy and both concern those who had recently given their lives defending their government.

The first was reportedly made in 431 B.C. by the Greek ruler Pericles shortly after the outbreak of the Peloponnesian War; the second was delivered during the American Civil War at Gettysburg, Pennsylvania, on November 19, 1863, by President Abraham Lincoln.

Passage A--Athens, Greece

Many of those who have spoken here in the past have praised the institution of this speech at the close of our ceremony. It seemed to them a mark of honor to our soldiers who have fallen in war that a speech should be made over them. I do not agree. These men have shown themselves valiant in action, and it would be enough, I think, for their glories to be proclaimed in action, as you have just seen it done at this funeral organized by the state. Our belief in the courage of so many should not be hazarded on the goodness or badness of any single speech.

Let me say that our system of government does not copy the institutions of our neighbors. It is more the case of our being a model to others than of our imitating anyone else. Our constitution is called a democracy because power is in the hands not of a minority but of the whole people. When it is a question of settling private disputes, everyone is equal before the law; when it is a question of putting one person before another in positions of public responsibility, what counts is not membership of a particular class, but the actual ability that the individual possesses. No one who could be of service to the state is kept in political obscurity because of poverty. And, just as our political life is free and open, so is our day-to-day life in our relations with each other. We do not get into a state with our neighbors if they enjoy themselves in their own way, nor do we give anyone the kind of frowning looks that, though they do no real harm, still do hurt people's feelings. We are free and tolerant in our private lives; but in public affairs we keep to the law. This is because it commands our great respect. . . .

They gave Athens their lives, to her and to all of us, and for their own selves they won praises that never grow old, the most splendid of sepulchres--not the sepulchre in which their bodies are laid, but where their glory remains eternal in others' minds, always there on the right occasion to stir them to speech or to action. For the famous have the whole earth for their tomb: it is not only the inscriptions on their graves in their own country that marks them out; no, in foreign lands also, not in any visible form but in people's hearts, their memory abides and grows. It is for you to try to be like them. Make up your minds that happiness depends on being free, and freedom depends on being courageous. Let there be no relaxation in face of the perils of war. . . .

Passage B--Gettysburg, Pennsylvania

But, in a larger sense, we cannot dedicate--we cannot consecrate--we cannot hallow--this ground. The brave men, living and dead, who struggled here, have

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consecrated it far above our poor power to add or detract. The world will
(45) little note nor long remember what we say here, but it can never forget what they did here. It is for us, the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us--that from these honored dead we take increased devotion to the cause for
(50) which they gave their last full measure of devotion; that we here highly resolve that these dead shall not have died in vain; that this nation, under God, shall have a new birth of freedom; and that government of the people, by the people, for the people, shall not perish from the earth.

1. Why does Pericles "not agree" (line 12) that a speech such as the one he is giving can further honor fallen soldiers?

(A) Public officials give too many boring speeches.
(B) Fallen soldiers are seldom the subject of speeches.
(C) Past speakers concentrated too much on winning personal fame.
*(D) The potential inadequacies of the speech could detract from the glory of the fallen soldiers.
(E) The glory achieved in battle is best remembered by loved ones, not by public officials.

Interpretation

2. The word "state" in line 26 means

(A) stage of development
(B) political unit
(C) declaration
(D) luxury
*(E) furor

Vocabulary-in-Context

3. In the second paragraph of Passage A, Pericles primarily stresses that

(A) a democratic spirit will help Athens win the war
(B) Athens will always be remembered
(C) people in neighboring countries envy Athenians
(D) the customs of others seem strange to Athenians
*(E) the Athenian form of government is an admirable one

Synthesis

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4. Which of the following best summarizes the reason given in Passage A for the soldiers having earned "praises that never grow old" (line 32)?

(A) People in foreign lands will praise the Greeks for ages.
(B) Memorials dedicated to heroic events will always be honored.
(C) The Athenians will honor their military heroes annually.
*(D) The memory of great feats will repeatedly inspire others.
(E) Relatives and friends of the heroes will never forget them.

Interpretation

5. It can be inferred from the content and tone of Passage A that Pericles' primary feeling was one of

(A) sadness because Athens had lost so many courageous soldiers
(B) dismay at his responsibility to guide the Athenians safely
(C) annoyance because the Athenians might not appreciate the sacrifices that had been made for them
(D) concern about whether the audience would agree with his views
*(E) pride in Athens and determination that it would continue into the future

Synthesis

6. In Passage B, the word "consecrate" (line 42) means

(A) absolve
(B) adore
*(C) make sacred
(D) begin praising
(E) enjoy properly

Vocabulary-in-Context

7. The "unfinished work" referred to in line 47 is the

(A) battle at Gettysburg
*(B) defense of freedom
(C) establishment of a government
(D) dedication of the battlefield
(E) honoring of the fallen soldiers

Interpretation

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8. Which of the following statements from Passage A does NOT have a parallel idea conveyed in Passage B ?

(A) "These men have shown themselves valiant in action" (line 12)
*(B) "our system of government does not copy the institutions of our neighbors" (lines 17-18)
(C) "They gave Athens their lives, to her and to all of us" (line 31)
(D) "It is for you to try to be like them" (lines 38-39)
(E) "freedom depends on being courageous" (lines 39-40)

Evaluation

9. Which of the following statements is best supported by a comparison of the excerpts from the tv speeches?

(A) Both excerpts urge an end to existing hostilities.
(B) Both excerpts are appeals to the audience for personal political support.
(C) Both excerpts emphasize the cruelty of the opponents of the state.
*(D) The intent and the development of ideas of both excerpts are similar.
(E) The purpose of both excerpts is to prepare the audience for the eventual outbreak of war.

Evaluation

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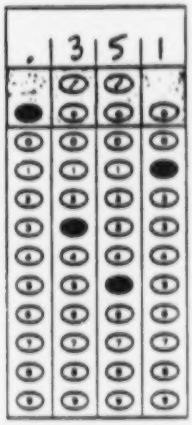
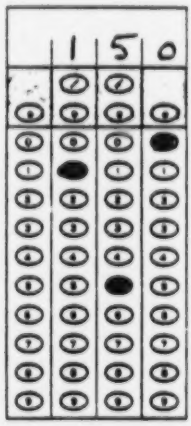
1. Written as a decimal, what is the value of

$$\frac{1}{1000} + \frac{3}{10} + \frac{5}{100}$$?



decimal answer

2. If the population of a certain country is increasing at the rate of one person every 12 seconds, by how many persons does it increase every half hour?



3-digit integer answer "real life" setting

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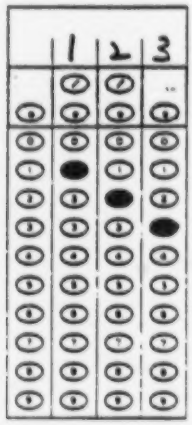
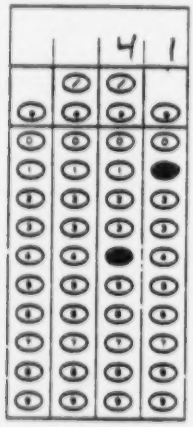
3. Martin and Alice buy newspapers for $0.20 each and sell them for $0.25 each. If, at the end of one week, Martin made a profit of $12.60 and Alice made a profit of $18.75, how many more papers did Alice sell than Martin?



3-digit
integer answer
"real life"
setting

4. If the average (arithmetic mean) of four numbers is 37 and the average of two of these numbers is 33, what is the average of the other two numbers?



integer answer
2-digit

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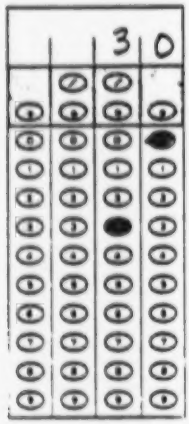
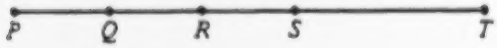
Properties of the Whole Number n
I. n is even.
II. n is a multiple of 3.
III. n is between 20 and 70.
IV. $n-1$ and $n+1$ are prime numbers.

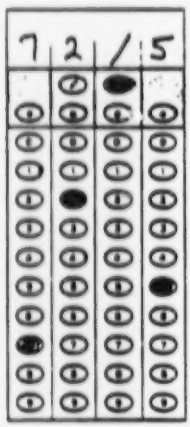
5. Grid in a value that satisfies all of the properties of n listed in the table above.



42 and 60 are also possible answers



6. In the figure above, segment PT has length 36, Q is the midpoint of PR, R is the midpoint of QS, and S is the midpoint of QT. What is the length of segment QS?



or 14.4 decimal or fraction answer

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GI

7. The members of a club decided to wash cars in order to earn money for the club. Each member of the club washed 3 cars and charged $2 per car. When they had finished, their receipts totalled $66, which included $6 in tips. How many members were in the club?

(A) 9
* (B) 10
(C) 11
(D) 20
(E) 22

GI

8. To make an orange dye, 3 parts of red dye are mixed with 2 parts of yellow dye. To make a green dye, 2 parts of blue dye are mixed with 1 part of yellow dye. If equal amounts of green and orange are mixed, what is the proportion of yellow dye in the new mixture?

(A) $\frac{3}{16}$

(B) $\frac{1}{4}$

* (C) $\frac{11}{30}$

(D) $\frac{3}{8}$

(E) $\frac{7}{12}$

GI - Omit choices for grid version

Questions 9-10 refer to the following chart and information.

	Machine				
	A	*B*	*C*	*D*	*E*
Efficiency	7	4	1	5	8
Ease of Use	6	6	3	4	1
Cost	3	7	9	5	6

A purchasing agent is trying to decide which one of five new pieces of machinery to buy. She identifies three categories to consider before making her choice: efficiency, ease of use, and cost. She then rates each machine for each category on a scale of 10 (best possible rating) to 1 (worst possible rating), as shown in the chart above.

9. If all categories are assumed to have equal weight, for which machine will the sum of the ratings be highest?

(A) *A* (B) *B* (C) *C* (D) *D* (E) *E*

10. If ease of use were not considered and the other categories were weighted equally, for which machine would the sum of the ratings be highest?

(A) *A* (B) *B* (C) *C* (D) *D* (E) *E*

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Sample Writing Items: Essay Prompts

Consider carefully the following statement and the assignment below it. Then, plan and write your essay as directed.

"Everything has its cost."

Assignment: Choose an example from literature, current affairs, history, or from personal observation in which a cause, an ideal, or an object had to be paid for at some cost. What was that cost? Was what was gained worth it, or was the cost too high? Give reasons for your position.

Consider carefully the following quotation and the assignment following it. Then, plan and write your essay as directed.

"People seldom stand up for what they truly believe; instead they merely go along with the popular view."

Assignment: Do you agree or disagree with this statement? Write an essay in which you support your opinion with specific examples from history, contemporary affairs, literature, or personal observation.

ASSIGNMENT:

In a well-organized composition describe a situation in which it was necessary for people to find a balance between conflicting interests. Include the following in your composition:

- A description of the circumstances of the conflict
- A discussion of the problems encountered by those attempting to reach a compromise or balance between the conflicting interests
- An explanation of what was learned by those involved

Be sure that you support your discussion. You may wish to use an example or examples from your own experience, your observation of others, or your reading in history, literature, science, or current events.

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Sample Writing Items:
Revision-in-Context Passages with Questions

Questions 1-6 are based on a passage that is one student's early draft of an essay. Because the passage is an early draft, some sentences need to be rewritten to make the ideas clearer and more precise.

Read the passage carefully and answer the questions that follow it. Some of the questions are about particular sentences or parts of sentences and ask you to make decisions about sentence structure, diction, and usage. Some of the questions refer to the entire essay or parts of the essay and ask you to make decisions about organization, development, appropriateness of language, audience, and logic. In each case, choose the answer that most effectively makes the intended meaning clear and follows the requirements of standard written English. After you have chosen your answer, fill in the corresponding oval on your answer sheet.

(1) *In more and more families, both husbands and wives work nowadays and with this there are new problems that result.* (2) *One reason there are so many two-career couples is that the cost of living is very high.* (3) *Another is because women are now more independent.*

(4) *An example of a two-career couple is Mr. and Mrs. Long.* (5) *Mrs. Long is a university professor.* (6) *Her husband works for a large corporation as a personnel counselor.* (7) *They have two children.* (8) *The Longs believe that the number of two-career couples is likely to increase.* (9) *However, society generally still expects a married woman to continue to fulfill the traditional roles of companion, housekeeper, mother, hostess.* (10) *Thus, as the Longs have experienced, conflicts arise in many ways.* (11) *When career opportunities clash, it is difficult for them to decide which career is more important.*

(12) *There are some basic things that can be done to try to solve a couple's problems.* (13) *Partners should discuss issues with each other openly.* (14) *Keep a realistic estimate on how much can be done.* (15) *Each partner must set priorities, make choices, and agree to trade-offs.* (16) *Men and women have to understand each other's feelings and be aware of this problem before they get involved.*

1. Which of the following is the best revision of the underlined portion of sentence 1 below?

   In more and more families, both husbands and wives work nowadays and with this there are new problems that result.

* (A) nowadays, a situation that is causing new problems
   (B) nowadays and this is what is causing new problems
   (C) nowadays and this makes them have new problems as a result
   (D) nowadays and with it are new problems
   (E) nowadays, they are having new problems

Sentence Structure

2. Which of the following is the best revision of the underlined portion of sentence 3 below?

   Another is because women are now more independent.

   (A) is women which are
* (B) reason is that women are
   (C) comes from women being
   (D) reason is due to the fact that women are
   (E) is caused by the women's being

Usage (diction)

3. Which of the following is the best way to combine sentences 5, 6, and 7?

* (A) Mrs. Long, a university professor, and her husband, a personnel counselor for a large corporation, have two children.
   (B) As a personnel counselor for a large corporation and as a university professor, Mr. and Mrs. Long have two children.
   (C) Having two children are Mr. and Mrs. Long, a personnel counselor for a large corporation and a university professor.
   (D) Mrs. Long is a university professor and her husband is a personnel counselor for a large corporation and they have two children.
   (E) Mr. and Mrs. Long have two children—he is a personnel counselor for a large corporation and she is a university professor.

Sentence Combining

4. In relation to the passage as a whole, which of the following best describes the writer's intention in the second paragraph?

   (A) To summarize contradictory evidence
   (B) To propose a solution to a problem
* (C) To provide an example
   (D) To evaluate opinions set forth in the first paragraph
   (E) To convince the reader to alter his or her opinion

Passage Organization

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Sample Writing Items:
Revision-in-Context Passage with Questions

5. In the context of the sentences preceding and following sentence 14, which of the following is the best revision of sentence 14 ?

   (A) You should keep a realistic estimate of how much you can do.
   (B) Estimate realistically how much can be done.
   (C) Keep estimating realistically about how much can be done.
   (D) They should be estimating realistically about how much it is possible for them to do.
* (E) They should estimate realistically how much they can do.

Sentence Structure

6. Given that sentence 16 is the conclusion to the essay, which of the following is the best way to express the ideas presented there?

   (A) Men and women must understand each other's feelings, making working couples aware of these problems before they make commitments.
   (B) If men and women are to get involved, the couple should understand each other's feelings and being aware of the problems caused by both working.
   (C) An understanding of each other's feelings and having an awareness of how two careers can be a problem is what men and women should have or else not get involved.
* (D) Before making commitments, couples should try to understand each other's feelings and be aware of the problems caused when both partners have careers.
   (E) Couples, before making commitments, should be aware of the problems of two careers, having an understanding of each other's feelings.

Development

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